

ALL ABOUT THE
IRON CEILINGS
SIDE WALLS & ETC.

MANUFACTURED BY

A NORTHROP & CO.



COR
23
MARY ST

PITTSBURGH

P A T E N T

Paneled Sheet Iron Ceiling.

PERMANENT, DURABLE, FIRE-PROOF, ORNAMENTAL.

Will Not Stain, Crack or Fall Off Like Plaster.

Will Not Shrink or Burn Like Wood.

Something fresh, new in design, not in imitation of old styles. Not imitation of anything. A Ceiling that is not a sham. A Ceiling with real Panels, real Mouldings, real Rosettes, not painted ones. Made, not of crumbling plaster or inflammable wood, but of IMPERISHABLE IRON.

What was only an experiment thirteen years ago has, by our persistent efforts and the merits of the thing, grown into a business which demonstrates that our ceilings are meeting the wants of the people wherever they have been introduced, and have proved themselves to be just what is wanted in every store and office; in warehouses and factories; in asylums and hospitals; in seminaries, colleges and school houses; in dwelling houses; in churches, halls and opera houses, where not only permanency and beauty in design and color are wanted, but also perfect ACOUSTIC PROPERTIES. In this respect our Fluted Paneled Ceilings are unsurpassed; and now, with greater facilities and with designs unlimited, we can offer ceilings that are suitable for every kind of building.

By our patented methods (we have five original patents which we own exclusively, and also half interest in the original Adler patent; we work exclusively under our own patents) our ceilings are made in such a manner as to be readily applied by ordinary mechanics, supplying a much needed want in our building materials in places where plastered ceilings are unsuitable on account of their liability to become detached by jarring of machinery, or any cause that produces jarring or concussion upon the floor above, or where wood is unsuitable on account of its shrinking, letting dirt and dust sift through. But over and above these, however, is its intrinsic value as a FIRE-PROOF PROTECTION against the spread of fire in a building.

These ceilings, as manufactured by us, have gained such an excellent reputation that several other manufacturers of sheet iron building materials are endeavoring to compete with us by offering to the public materials, (sheets, mouldings and rosettes) *which, when put up* as a ceiling, are gross infringements on our patents. By selling nothing but materials, and taking no contracts for work put up and finished, these manufacturers think to avoid litigation themselves and entail the penalty for infringement upon the innocent purchaser or party who had the work put up. We therefore warn all persons against purchasing or putting up as a ceiling metal sheets in which the connecting edges are covered by a moulding or cap, and the intersections of the mouldings are covered by rosettes, bosses or caps. We propose to protect ourselves and our agents as far as law will protect us.

Cross Section of
AUDIENCE ROOM L. Scale $\frac{3}{16}$ in. 1 foot.

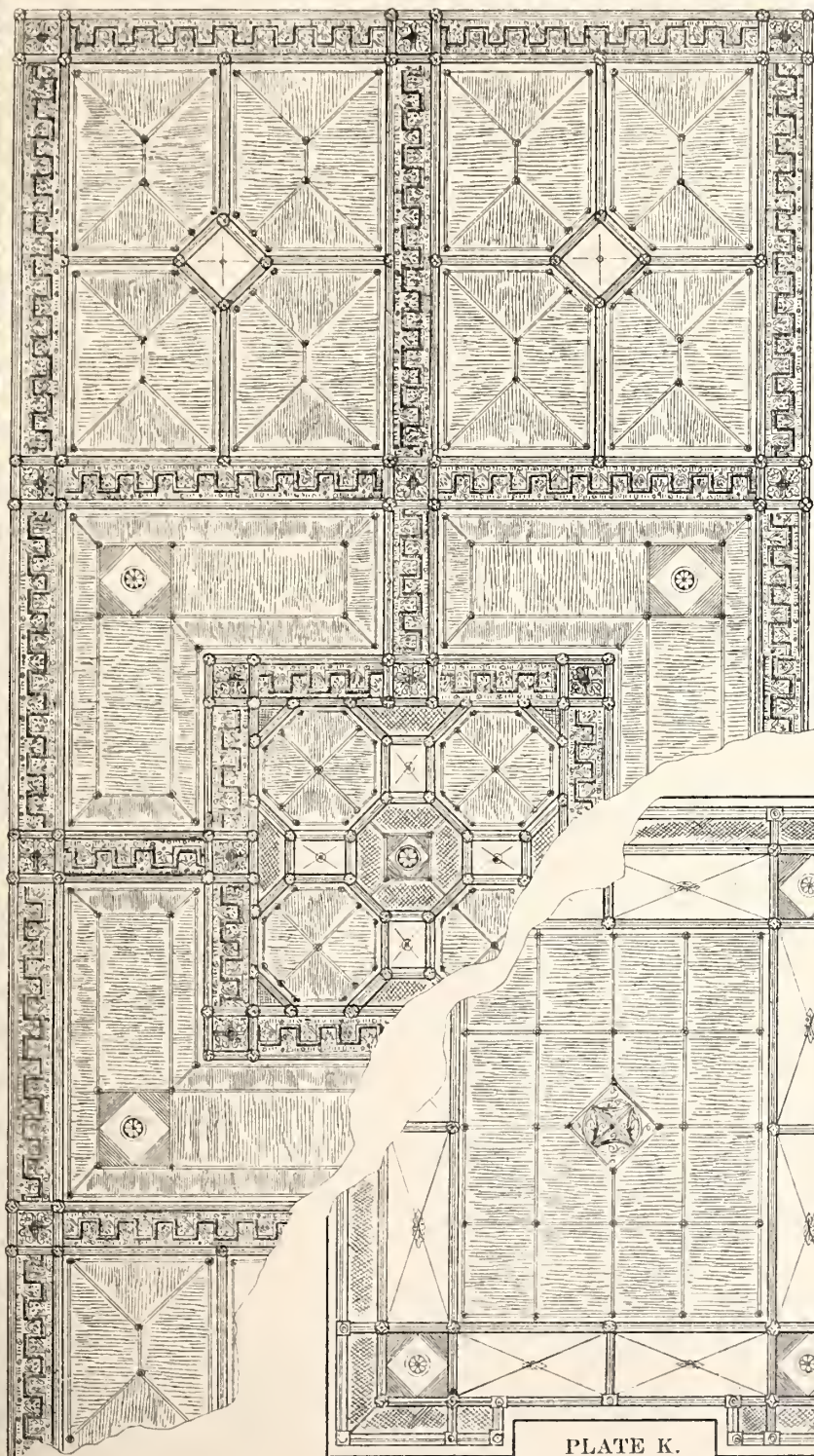
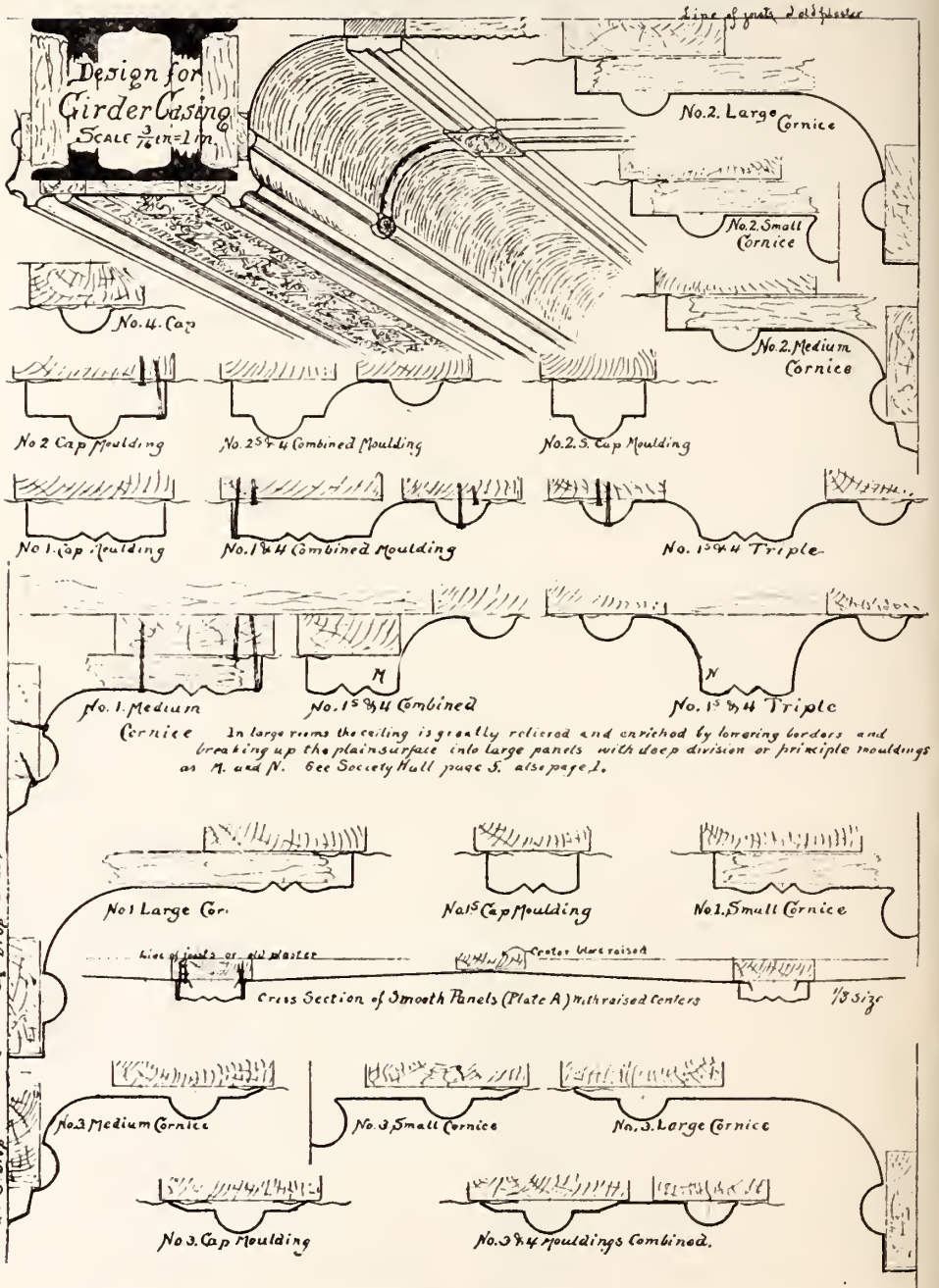


PLATE K.

STOCK CORNICE AND CAP MOULDINGS AND ROSETTES.



No. 1 A. No. 1 B. No. 1 C. No. 2. No. 3. No. 4. Leaf.



Experience Demonstrates that in case of fire in a building the damage done by water to the wood or plaster ceilings is usually greater than that caused by the burning. We are constantly placing ceilings in buildings in which fire has occurred in the upper stories and water had damaged the plaster or wood ceilings in all the stories below. Our Patent Paneled Ceilings are not only a **fire protection** but a **water protection** as well.

A fire cannot burn up through an iron ceiling, neither can it burn down through an iron ceiling if the floor above is flooded. It is therefore a positive check to a fire, beginning at either top or bottom of a building, (provided the elevator shaft, if there is one, is also lined with iron,) and the water used in flooding the building will not injure the ceiling in the least if it is constructed as our Patent Paneled ceilings are—to let off all water that may happen on the upper side of the ceiling. Any such use of water or constant leakage will soon cause the ceiling to be eaten up with rust, if made to hold water. Steel is not considered as good as iron as it is more liable to rust, and paint does not enter the grain or texture as it does in iron, therefore is not the protection to steel that it is to iron.

Sheet iron, of the same weight and quality as used in these ceilings, has been in use for twenty, thirty, yes, fifty years, on roofs and outside walls, exposed to all the inclemencies of wind and storm, winter's snow and summer's heat, until it has become established as the best and most durable roofing material in use. If such material has proved of such value in roofing, how much better adapted it is for use where it has but one element to withstand—THE CHANCE OF DAMAGE FROM LEAKAGE of water only—and this chance fully provided for in our PANELED IRON CEILING, a provision by which every moulding is made a channel for the conveyance of any leakage that may occur, and every rosette covering the joints of the mouldings concealing openings through which water may escape.

Iron Ceilings Compared with Plaster.—The plan of plastering the interior of our buildings has been so long in use and has obtained so firm a hold on the public, that although various improvements suggested by practical men, as to the manner in which plastering should be done, indicate their recognition of its faulty character, it will probably be a work of time to bring into general use any substitute for it. Nevertheless, it will readily be acknowledged that no matter how carefully it may be done, either as a ceiling or a side wall finish, plaster is open to many serious objections: it stains readily; is very porous, allowing current of air to pass through it, depositing smoke and dust, which soon discolor it, and may fill it with germs of disease; a very little vibration causes it to crack and fall off in patches, rendering it unsightly; while in case of fire the water necessary to put out the fire will wet and soak the plaster, destroying it completely; also, slight leakage in the roof or water pipes stains it and finally causes it to crack off and fall.

These are facts patent to every one connected with the building trades, as well as to every occupant of a building.

Unsightly, cracked, broken and patched plastered walls and ceilings are a constant source of expense and annoyance to every occupant, owner or agent of buildings. Nearly every church and school building committee knows something about the annoyance and expense of plastered ceilings, and the wrangles between members who want the best material that can be found and those who want the cheapest, and who rather enjoy dodging broken plaster. These facts may be stated without prejudice, and the fact that at this day many practical men are devising and adopting various methods of overcoming the weakness and increasing the stability of plastering, by the use of wire or iron lathing, is a confession that the old method is a failure. Iron or wire lathing may be an improved method so long as you can keep it dry, but after a few wettings and soakings the iron rust begins to show through, and after a few years accumulates, and then comes separation and disintegration, and the same old difficulty, stained and broken plaster. Now is it not patent to every practical person that what is needed is not *change of method*, but *change of material*. A change from a material weak and crumbling in itself to one that is strong and durable. From a material that fills your building with dirt, daubing everything with which it comes in contact, to a material that will not soil the whitest hand. From a material that requires hogsheads and tons of water with which to incorporate it, and weeks extended into months in which to apply and season, during which time all other work in the building must cease; and then the process of evaporation,

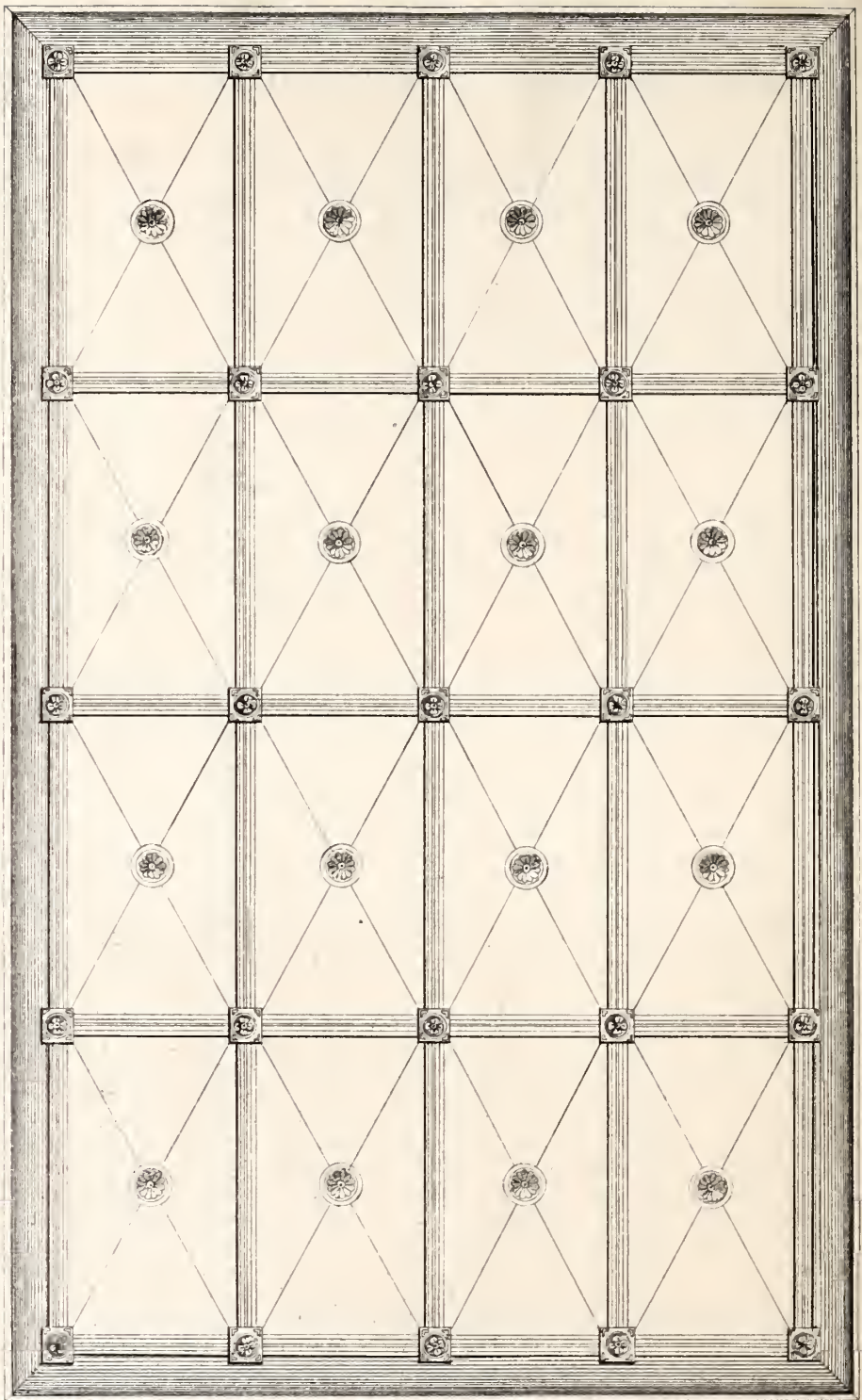
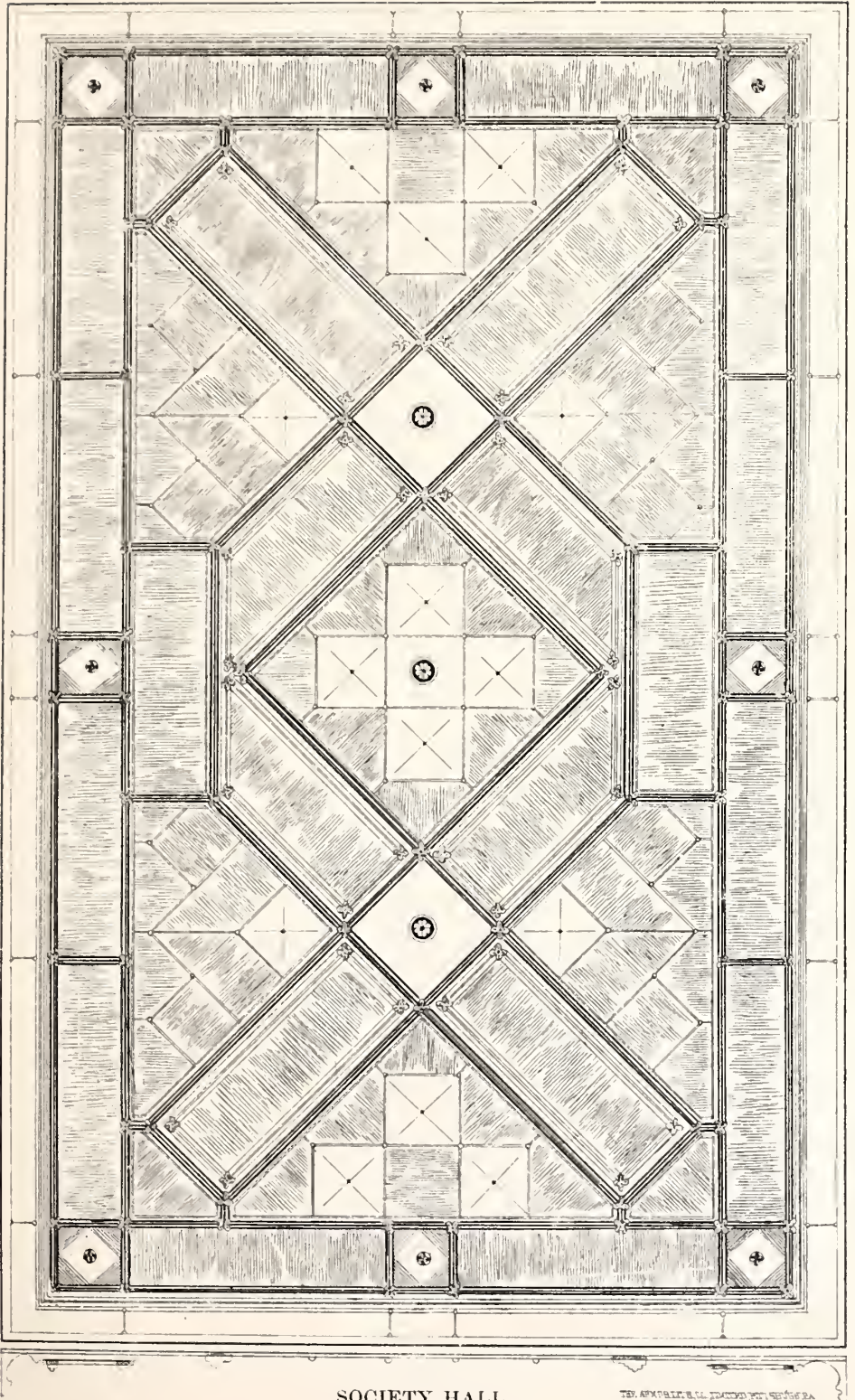


PLATE A.. Made up of SMOOTH RAISED PANELS.
 With No. 1 Mouldings and Rosettes, Fluted Cove Cornice. This is also made
 up with Fluted Panels in Center and Smooth Panel Border or vice versa,
 or with No. 2 Mouldings and Rosettes. (For details of Mouldings and
 Rosettes see page 2.) Scale $\frac{1}{2}$ in. 1 feet.



SOCIETY HALL.

THE ARCHITECT, R. L. JONES, NEW YORK.

filling the wood work with moisture, causing it to swell, with the resultant contra effect of shrinking as the building dries out, opening every joint in the wood work.

Compare this with a material, the use of which interferes with no other part of the finishing of a building, causing no delay and no injury to other finishing material. Another very important item, especially in buildings having large span between the supporting walls, such as stores and salesrooms, halls, school houses and especially churches, is the difference in weight. Plaster in ceilings usually weighs from eight to ten pounds to the square foot, while our **paneled iron ceilings weigh less than one pound to the square foot.**

Estimate this difference in a church ceiling of ordinary size, say of fifty squares: In iron, the weight is two and one-half tons; in plaster, TWENTY-FIVE TONS, to be supported by the roof timbers. Is it any wonder that roof timbers sag, and walls spread, and plaster cracks and falls off? Or, that the rolling of a cask or truck, the tipping of a case of goods on floors over a store, the tread of a score or two of children in our school rooms, the jar of machinery, the encore and stamping in a music hall or theater, should loosen this weight of weak plaster, destroying and befouling in its downfall every thing it touches, and in numerous instances maiming and killing persons on whom it falls?

In view of these facts, is it not time for owners of buildings, and all persons interested in building our stores, our colleges and schools, our public halls and court houses, our churches—yes, is it not time for our architects, who have been brought up on plaster—to stop and consider the adoption of some other material?

To those who have taken the time to examine our material—our fine textured iron, ribbed and cross-ribbed, looking as if it were a woven texture—forming panels surrounded by neat and accurately formed mouldings, all the joints of which are covered by rosettes of artistic design, it has proved a revelation, dispelling prejudices against iron, formed by seeing coarse corrugated iron nailed up in a cheap, inartistic manner, the nail heads emphasizing the laps and joints, a material and method suitable only for the outside covering of the commonest and cheapest buildings.

No wonder the architect cries out against such material when used as an inside finish to an otherwise fine and well planned building. Would it not be far better for the architect to work with the manufacturer and help to bring into general use a material that our illustrations and our photographs, as well as the increasing demand for our work and the universal approval and commendation of those who have our ceilings, demonstrates to be the **BEST MATERIAL** for inside finish in our buildings that has yet been tried.

The comparison of first cost, of course, is in favor of plaster. Iron is not yet as cheap as mud. Still, the difference in cost is not to be compared to the difference in value. A plain iron ceiling will cost about double that of plain plaster, or about the same as ordinary plain wood ceilings.

As to **Iron Ceilings Compared with Wood**, we claim nearly as great a difference in value as there is between iron and plaster. Wood ceilings, while not open to the same objections as plaster, are still very objectionable on account of their liability to shrink, and permitting the dirt to sift through, but more especially on account of their inflammability, while the cost, if put up in the same attractive manner and shape in which the iron is put on, would exceed the cost of iron.

We give a ceiling that will not shrink, and certainly will not burn, and for use over plaster very far superior, as it allows of no plaster sifting through, (as is the case after a wood ceiling has been up a few years), while the appearance is decidedly in favor of iron. A paneled and carved wood ceiling may give an impression of value and cost and richness, and yet be, like a cloudy day, very gloomy in effect. Our iron ceilings convey the same impression of value and cost, and when enriched with colors and bronzing the effect is much richer, and, like a bright day, always looks cheerful. No material in use gives such fine effect to frescoes, and yet the richest frescoed iron ceilings cost no more than cabinet finished wood, while oval crimped, or our F style of iron ceilings, cost no more than the plainest wood.

A wood ceiling is always deteriorating. All the heated air of any room goes to the ceiling; and in most rooms, over stoves, registers or chandeliers, it becomes so hot that it is impossible for

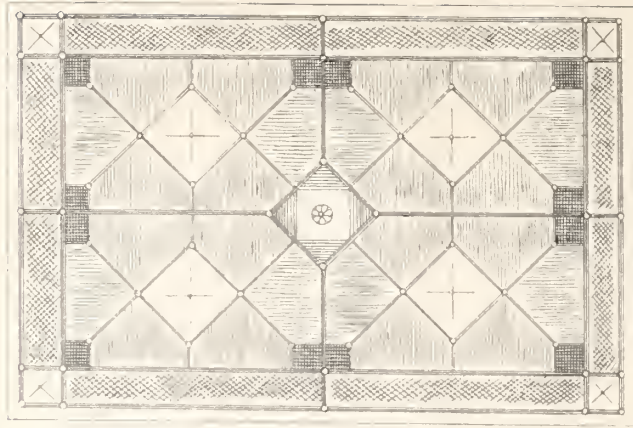
a wood ceiling to remain in good order. It is bound to shrink, and no lumber can be obtained so dry but that when put up into ceilings the joints will open, dust will gather in them—making black lines, the paint will crack, and the ceiling rapidly degenerate. Whereas there are iron ceilings ten years old in this dirty city and looking as good as new.

Iron Ceiling Over Old Plaster.—There is no use to which this Ceiling has been put that has given and is giving such perfect satisfaction as in its application over OLD PLASTERED CEILINGS. This we do without removing the old plaster, causing no muss, making little or no dirt and in much less time than it takes to re-plaster, and generally without any interference with business. Where re-plastering would be detrimental to goods, or where time is of essential importance, the rapidity and cleanliness with which this work can be done is of great value, and is bringing this work into great demand.

Adaptability to Buildings.—Plaster, made as it should be made, and put on as it should be put on, is by far the cheapest material used for ceilings and side walls. Good enough for ceilings in small rooms where the joists do not span more than ten or twelve feet, such as ordinary dwellings and small offices, and also for the side walls of nearly all rooms. But there *are* rooms in which plaster should never be used, and for which iron is undoubtedly the best and cheapest (*according to its value*) and peculiarly adapted on account of its strength and light weight. Among this class of rooms we mention, first, all high buildings of three to ten stories; stores, office or residence buildings, where a fire in the upper stories would make it necessary to flood the building. All rooms having *wide flat ceilings*, such as stores, offices, halls, schools, hotel dining rooms and large porches and libraries. For such rooms we make a large variety of designs from our plain styles **F** or **D**, to the more moderately ornate like **E**, **E Special**, or the plain but elegant **A**. If still more artistic and ornate work is wanted, we refer to our styles **A Special**, or **Hall Ceilings**. Our pages illustrate only to a small extent the great variety of designs which we make, necessitated by the great difference in size and shape of ceilings; a difference of only a foot or two requiring a variation in design.



We would next call your attention to the great value of our work in Churches, for both ceilings and side-walls; a value not only in its elegant and attractive appearance, its permanency and extreme lightness in effect as well as weight, but also in its superior acoustic properties; insomuch that such a thing as echo cannot occur in a church or hall ceiled throughout with iron as we apply it. Philosophically, it is the only material in use which can claim to control all acoustic laws,



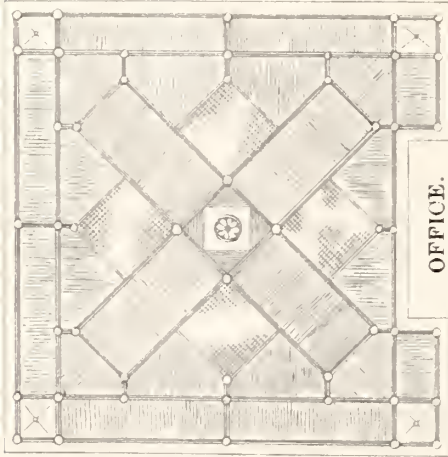
PARLOR CEILING, B.

Scale $\frac{3}{8}$ in. 1 foot.

Parlor and Office Ceilings are shown with Fluted, Double Fluted and Smooth Panels, and 2 inch No. 1 and No. 4 Mouldings and Rosettes.

Border, Corner and Center Pieces of Embossed would look well with these patterns.

Bed Room has No. 4 Mouldings and Rosettes.



OFFICE.

BED ROOM. CLOSET.

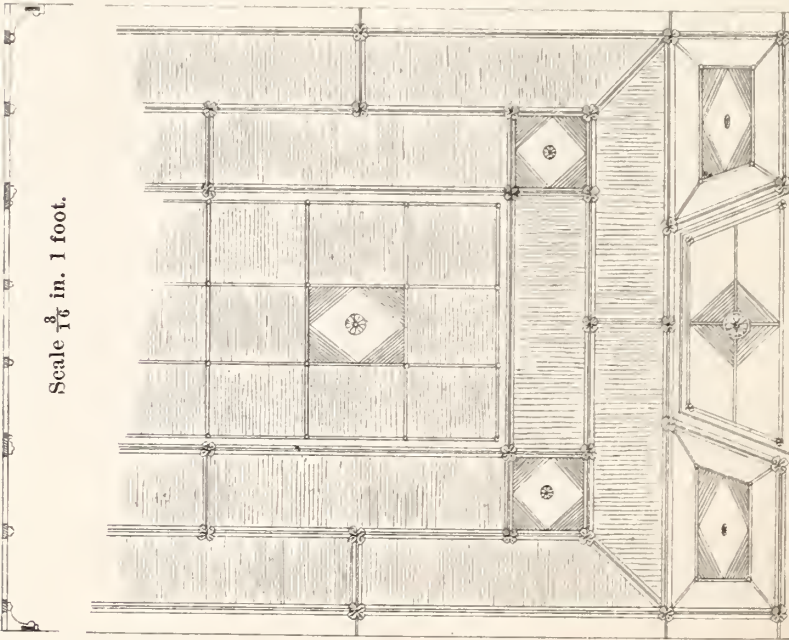
Scale $\frac{3}{8}$ in. 1 foot.

PLATE E—Showing STORE FRONT.

With all Fluted Panels, Nos. 2 and 4 Mouldings and Rosettes. Can be made up with Nos. 1, 3 & 4. Nos. 2, 3 & 4, or Nos. 3 and 4 Mouldings and Rosettes. (See page 2.)

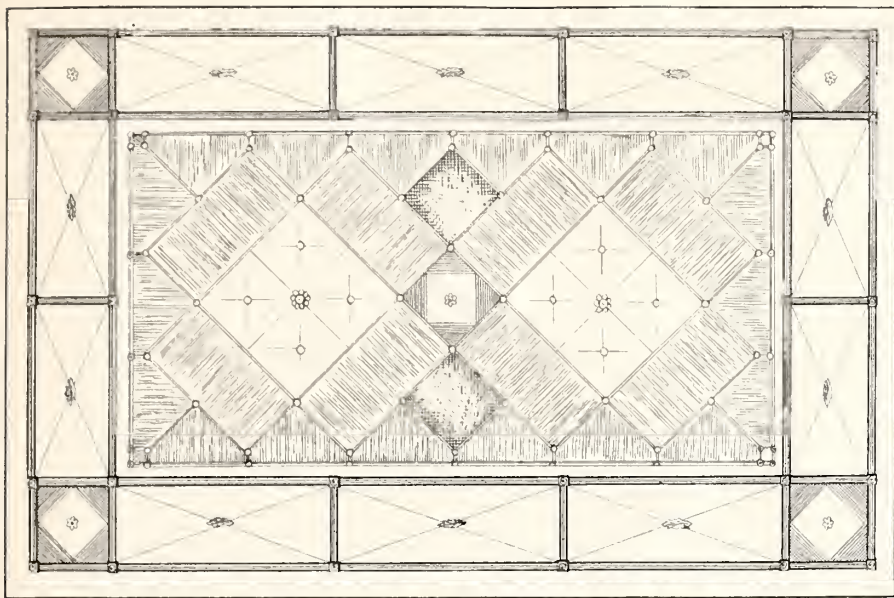


PLATE A SPECIAL. Scale $\frac{3}{16}$ in. 1 foot.

Diagonal Pattern, Smooth, Fluted and Double Fluted Panels.

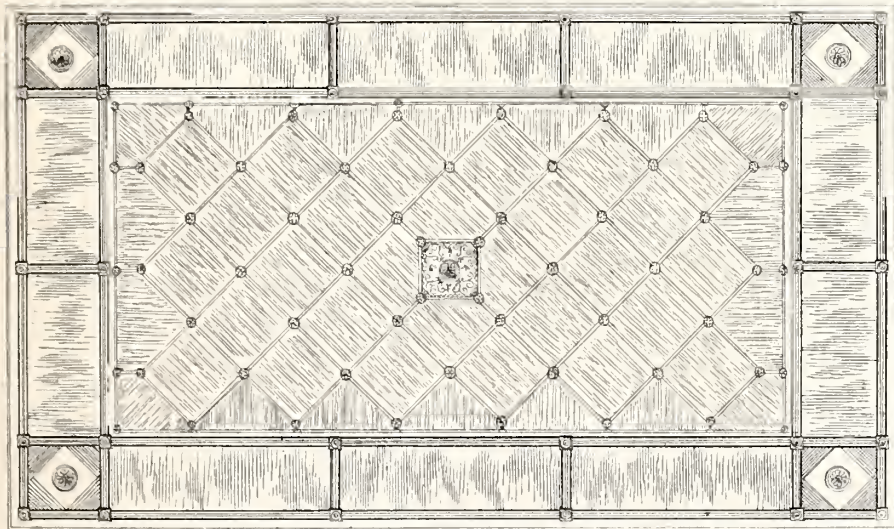
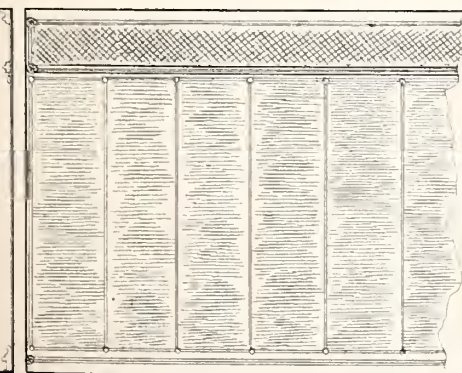


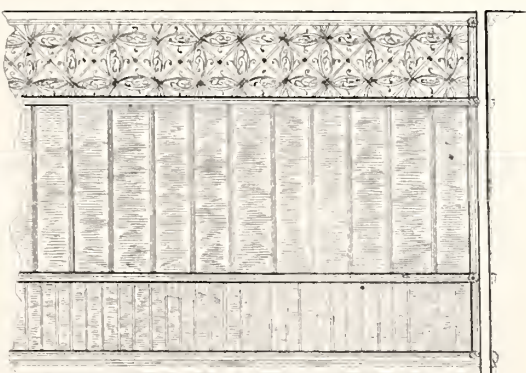
PLATE F. Special. Scale $\frac{3}{16}$ in. 1 foot.

Showing Diagonal Pattern in all Fluted Panels, Nos. 1 & 4 Mouldings and Rosettes, Nos. 2 and 4, or 3 and 4 M. & R. will do. (See page 2.)



SIDE WALL G. Scale $\frac{3}{16}$ in. 1 foot.
With Foot and Frieze Mouldings, Dbl.
Fluted Frieze and Field of Fluted
Panels, and No. 4 Cap Mouldings.

THE AMERICAN ART CO.



SIDE WALL H. Scale $\frac{3}{16}$ in. 1 foot.
With Foot, Dado and Frieze Mouldings.
Embossed Frieze. No. 1 Crimped
Sheets in field, Oval Crimped Wainscot.

as it neither absorbs sound-waves nor reflects them. Of this we can have the attest of every church in which our ceilings have been placed. Not only is this work perfect in acoustics and artistic in appearance, but also in its heat retaining properties. Plaster is porous and the cold winds blow right through it. Wood ceilings are open to the same objection, only much more so; while iron is tight and no wind can blow through it. And this brings us to another very important feature, to wit, that iron is not porous, and therefore will not absorb disease germs and hospitalism, making it especially valuable for use in HOSPITALS and ASYLUMS, as it can be easily washed and kept clean and pure. Intelligent superintendents have been attracted to its value, and have introduced it into the large asylums at Binghampton and Willard, N. Y.; Springfield, Mass.; Washington, D. C.; Uniontown and Dixmont, Pa., and Concord, N. H. Any one can observe in the light and dark shades in a plaster ceiling, showing every lath and joist, to what an extent plaster absorbs the light and invisible atoms that float in the atmosphere as it filters through, caused by the air pressure of opening and shutting the doors, or the stronger currents impelled by outside wind pressure, forces the air through this porous substance.

All these features of strength and permanency, of lightness and tightness, simplicity of application and perfect adaptation to all requirements, should be taken into consideration by persons who are building or repairing, in order to determine whether the higher cost of our materials is not counterbalanced by its intrinsic value.

It is impossible to convey in an ordinary wood cut an idea of the ornamental character of our ceilings, attainable by an artistic use of colors and the combination of our different styles. Our cuts give an idea of the outlines and effects (without colors) of the individual styles of paneled ceilings, also of our plain fluted and oval crimped ceiling. By combining these different styles on the same ceiling we are enabled to produce a great variety of effects, and also to adapt our ceilings to the size, height and character of the room.

These ceilings are made principally of fine fluted iron, on account of its superior acoustic properties, and also for the peculiar soft effect it has to the eye, combined with double fluted or twilled and smooth panels. We also carry a small stock of Northrop's Embossed Plates, as shown, for friezes and side-walls. The many different shapes and sizes of rooms necessitate different arrangements and sizes of panels, which are formed by mouldings, of which we carry a large variety, as shown on page 2. We also combine these in a number of ways for eaves and ridges in churches, and can form special mouldings and cornice, (cove or bevel,) as desired. The cornice is measured in with the ceiling, adding whatever it drops on side walls to the width and length of the room. The intersections are all covered by rosettes of tasteful design to fit the different mouldings, and put on with nails or screws.

The designs are given as suggestions. Many ceilings sent out are of special design, to suit the size and shape of the room, but usually after some of the styles shown. The single panels can not be larger than 30x100 inches; but the size can be varied within that limit to suit any room, and there is scarcely any limit to the combination of these various styles we can make. So in very large, high rooms, we form large panels of a number of small ones, using various and heavy mouldings to set them off, as shown in our Society Hall.

Besides the varied forms our ceilings are capable of, they may be painted in any or as many colors as taste may desire. And however painted, it is permanent and not liable to be broken out or disfigured by water stains, as are decorations on plaster.

For all ordinary work we use No. 27 smooth finished iron.

In putting up these ceilings, whether on joists or over old plaster, we put furring strips $\frac{3}{8}$ inch thick and 2 to 4 inches wide, above all mouldings, which are all made level and in line. Those panels which have center ornaments require also a block above the ornament to secure it to. The smooth panels raise $\frac{1}{2}$ inch in the center, and so that block must be $\frac{1}{2}$ inch above the furring. When the furring is up we put up the panels, then the cornice, and lastly the mouldings and rosettes.

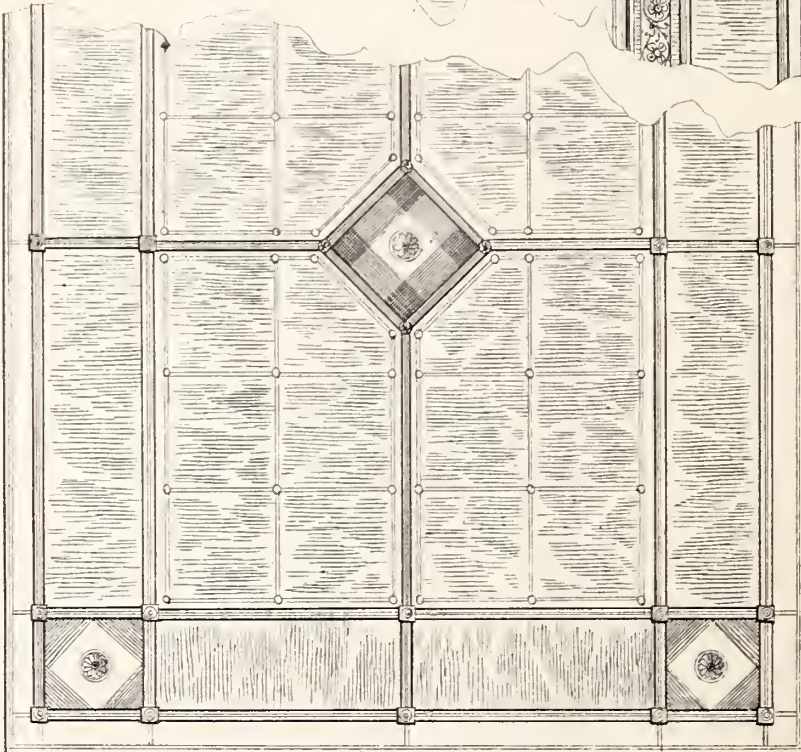
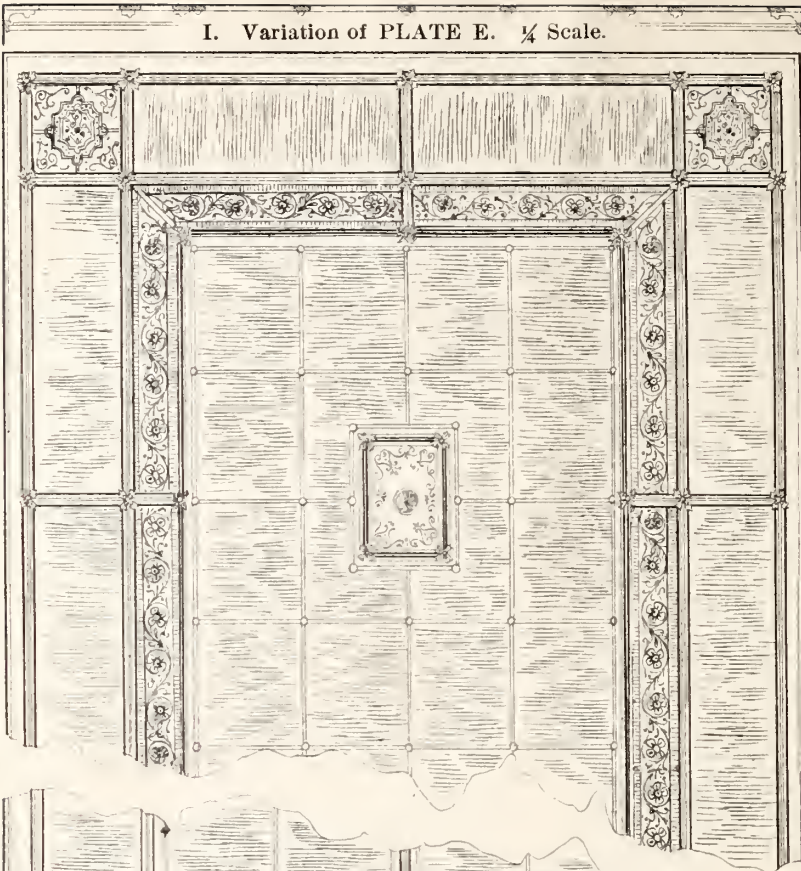
By these, our patented methods, we have so simplified and cheapened the cost of iron ceiling that the price is but about half what it was ten years since, and, being the cheapest good ceiling, it is rapidly growing in favor.

We also have methods of attaching these ceilings to iron I beams, thus giving an ornamenta ceiling where usually we see crude and unornamental construction.

Persons writing to us in regard to ceilings should bear in mind that we want accurate information in regard to SIZE, SHAPE, HEIGHT OF ROOM, whether-ON NEW BUILDING or OVER OLD PLASTER; the DIRECTION in which the JOIST RUN; any angles, openings or projections; showing whether a DEEP CORNICE or a LIGHT CORNICE IS WANTED. Bear in mind, then, that in order to have satisfactory information in regard to our ceiling you must give us satisfactory information in regard to your wants.

For the benefit of those who wish to inform themselves in regard to our ceilings, we refer to the following places where they can be seen:

D. F. Mitchell, Public School,.....	Prescott, Arizona	Rev. W. J. Boone, Church,.....	Caldwell, Idaho
Samuel Hill,.....	"	R. W. Berry, Stores,.....	Hailey, "
Alfred Kinney, Court House,.....	Globe, "	Bunker Hill & Sullivan M. & C. Co., Office, Wardner,.....	"
Mitchell Bros., Builders,.....	Melbourne, Australia	Jno. A. Nash, Public Schools,.....	Audubon, Iowa
Rev. Pl. Zarn, Church,.....	Caulksville, Ark.	Dierkey & Rolling, Builders,.....	Bellevue, "
J. H. Clendenning, Esq.,.....	Fort Smith, "	R. T. Hosford, Dining Room,.....	Burlington, "
A. R. Smith, Pres., Avenue Hotel, Hot Springs,.....	"	F. A. Kennon,.....	Corning, "
Jas. Smith, Builder,.....	Auburn, Alabama	W. E. Allen, I. O. O. F. Hall,.....	Centerville, "
Rev. A. Bandry,.....	Durban-Natal, Africa	Ludwig, Hunt & Long, Opera House,.....	Centerville, "
Jas. M. Kirk,.....	Auburn, Cal.	Rev. L. Ream, Church,.....	Liscomb, "
A. Langenburger,.....	Anaheim, "	L. M. Shaw & Sons, Stores,.....	Monroe, "
N. M. Johnson, Church,.....	Pasadena, "	Norton & Bisbee, Church,.....	Prairie City, "
Hontz & Sargent, Store,.....	Rosita, "	W. A. Shippy, M. E. Church,.....	Reinbeck, "
Douglas Bros,.....	Toronto, Canada	Rev. D. L. Mackenzie, Eng. Luth. Church, Sioux	"
T. V. B. Binyag, Parlor,.....	Yarmouth, N. S.	City,.....	"
A. Reid, Architect, Bank,.....	Concepcion, Chili	Post Office,.....	Frazer, "
Sr. Don O. Smith, Parish Church,.....	Cardenas, Cuba	J. E. Sedgewick, Parlor,.....	Waterloo, "
Roman Catholic Church,.....	Guadalupe, Costa Rica	W. E. Blackstone,.....	Anthony, Kansas
Sr. J. L. de Jongh, C. F.,.....	San Jose, "	Wm. Boyle, Pres. Church,.....	Hoxie, "
C. W. Fair, Tabor Block,.....	Denver, Colorado	J. T. Black, Stores,.....	Ottawa, "
S. E. Sessions, Parlor,.....	Colorado Springs, "	Rev. A. M. Geiger, Church,.....	Valley Falls, "
O. A. McFarland & Co.,.....	Longmont, "	H. C. Long, Church,.....	Wyanadotte, "
Bulger & Hupp, Architects, Stores, Trinidad,.....	"	Ferguson & Watson, First Nat'l Bk, Herrodsburg, Ky.	"
Retreat for the Insane,.....	Hartford, Conn.	DeLong & Co.,.....	Lexington, "
Gen. G. W. Bentley,.....	New London, "	Carpenter, Annear & Co.,.....	Louisville, "
Safety Deposit Co., Office,.....	New Haven, "	R. B. Pottinger, Builders,.....	Owensboro, "
F. B. Noyes, Parlor,.....	Stonington, "	Wm. Goddard, Church,.....	Paducah, "
S. Parsons, Parlor,.....	Thompsonville, "	Carl & Reese, Stores,.....	Synthiana, "
Ballantyne & Co., Store,.....	Washington, D. C.	L. H. Gruber & Son, Stores,.....	Shelbyville, "
Samuel Bieber, Store,.....	"	N. O. Ry. & Mill Supply Co.,.....	New Orleans, La.
J. Gronmiller, Architect,.....	"	J. H. Arbaugh, Parlor,.....	Rayville, "
H. M. Flagler, Alcazar Hotel, St. Augustine, Florida	"	Jorge Storek,.....	Santa Barbara, Mexico
New Home Sewing Machine Co.,.....	Atlanta, Georgia	Rich. Chenery, Hotel,.....	Belfast, Maine
R. D. Cole Manfg. Co., Offices,.....	Newman, "	Town Hall,.....	Brewer, "
H. L. Boon, Stores,.....	Valdosta, "	Rev. J. H. Bennett, M. E. Church, Dresden Mills	"
Jas. Moore, Dwelling,.....	Belfast, Ireland	G. M. Stevens,.....	Deering, "
J. Eye, Store,.....	Aurora, Ills.	W. S. Stubbs, Parlor,.....	Foxcroft, "
Rev. B. W. Reed, First Baptist Church, Belvidere,.....	"	Rev. W. H. Spencer, Baptist Church, Waterville,.....	"
W. A. Elder, Druggist,.....	Bloomington, "	Vaile & Young,.....	Baltimore, Md.
Aisthorpe & Halliday,.....	Cairo, "	J. T. Ballinger, Parlor,.....	Mechanicsville, "
Kohl & Middleton, Museum,.....	Chicago, "	L. W. Gunby, Offices,.....	Salisbury, "
Hall Safe & Lock Co.,.....	"	Rev. S. M. Brande, Church,.....	Woodstock, "
Thos. Whitfield, Druggist, Wabash and	"	Lt. Col. J. Porter Houston, Navy Yard, Boston, Mass.	"
Jackson,.....	"	C. H. Smith, Esq., Parlor,.....	"
Mead & Co., Offices,.....	"	A. D. Parks, Parlor,.....	Brookfield, "
King Bros., Store, 159 Clark street,.....	"	Geo. E. Bosworth,.....	Amherst, "
Lincoln National Bank,.....	"	Dwight Mfg. Co., Offices,.....	Chicopee, "
Dr. Price, Baking Powder, Offices,.....	"	L. White, Esq., Y. M. C. A. Parlor,.....	"
E. McNabb & Son, Architects,.....	Decatur, "	F. F. Marple,.....	Chelsea, "
Chas. H. Gillespie, Store,.....	Danville, "	F. Holmes, Church,.....	Chiltonville, "
Col. L. Dyer, House,.....	Duquesne, "	Geo. E. Clark, Cong. Church,.....	Falmouth, "
Chas. Roberts, Grocery,.....	Evanston, "	C. H. Baush & Son, Pres. Church,.....	Holyoke, "
J. F. Gates, Store,.....	Henry, "	Lawrence National Bank,.....	Lawrence, "
Jno. Payne & Co., Store,.....	Kansas, "	E. Searle & Co., Church,.....	"
Miller & Wineteer, Church,.....	Minonk, "	Hamilton Mfg. Co., Offices,.....	Lowell, "
Rev. Wm. Roegge, Church,.....	Milford, "	H. M. Daggett, Library,.....	Attleboro Falls, "
Dorovan & Vennam, Bankers,.....	Niantic, "	Dr. G. W. Mills, Parlor,.....	Medford, "
A. Seelig, Store,.....	Port Byron, "	L. C. Ferrard, Parlor,.....	Melrose, "
E. E. Rogers & Son, Bankers,.....	Springfield, "	Smith College,.....	Northampton, "
Ballard & Ballard, Archts., Y. M. C. A.,.....	Smithboro, "	Codd & Allen, Cottages,.....	Nantucket, "
R. H. Elam, Church,.....	Watseka, "	F. A. Robbins, Drug Store,.....	Pittsfield, "
Masonic Hall,.....	"	Dr. W. P. Richardson,.....	Scituate, "
H. E. Brown & Co.,.....	"	H. H. Joy, Residence,.....	So. Weymouth, "
First National Bank,.....	"	R. L. Day, Residence,.....	Frammingham, "
Court House,.....	Brownstown, Ind.	J. H. Lewis, Agent, Asylum,.....	Springfield, "
A. C. Thompson & Co., Bank,.....	Edinburg, "	Miss E. L. Andrews,.....	Richmond, "
J. L. Orr, Archt., First Pres. Church, Evansville,.....	"	F. Arnsby,.....	Wilkinsonville, "
Nordyke & Marmion, Stores,.....	Indianapolis, "	Mrs. L. Rand, Parlor,.....	Westfield, "
H. M. Matson, Architect,.....	Fort Wayne, "	Rev. E. S. Best, M. E. Church,.....	Whitinsville, "
H. Watts, Stores,.....	Knightstown, "	K. Danforth, Parlor,.....	Williamstown, "
M. E. Church,.....	"	T. T. Hallett, Society Hall,.....	Yarmouth, "
Manrice Herbst, Dealer,.....	Madison, "	J. R. Rockwell, Store,.....	Allegan, Mich.
W. J. Hile,.....	Mt. Vernon, "	Adrian Gas Co.,.....	Adrian, "
Hoosier Drill Co., Store,.....	Richmond, "	A. T. Metcalf, Store,.....	Battle Creek, "
Clift, Williams & Co., Store,.....	Terre Haute, "	Parks & Co., Hall and Store,.....	Crystal Falls, "
W. C. Bunton, Architect,.....	"	A. Linstfield, Store,.....	"
State Normal School,.....	"	Rev. L. Opyrchalski, R. C. Church,.....	Alpena, "
Jno. Grabner, Store,.....	Warsaw, "	B. F. Sweet, Store,.....	Carson City, "
P. Sonna, Store and Hall,.....	Boise City, Idaho	Geo. D. Van Vranken, Store,.....	Cadillac, "

I. Variation of PLATE E. $\frac{1}{4}$ Scale.J. Variation of PLATE E. $\frac{1}{4}$ Scale.

Style J—Is made up of all fluted panels and Nos. 1 and 4 Mouldings and Rosettes, with triple mouldings in center, double mouldings next to border.

Style I—Is made up of all fluted panels excepting center and corner pieces and border in Embossed as shown. Mouldings and Rosettes are Nos. 2, 3 and 4.

These are also made up with any of the Nos. 1, 2 or 3 mouldings on border, and No. 4's in center. (See mouldings, page 2.) Smooth panels go very well in border.

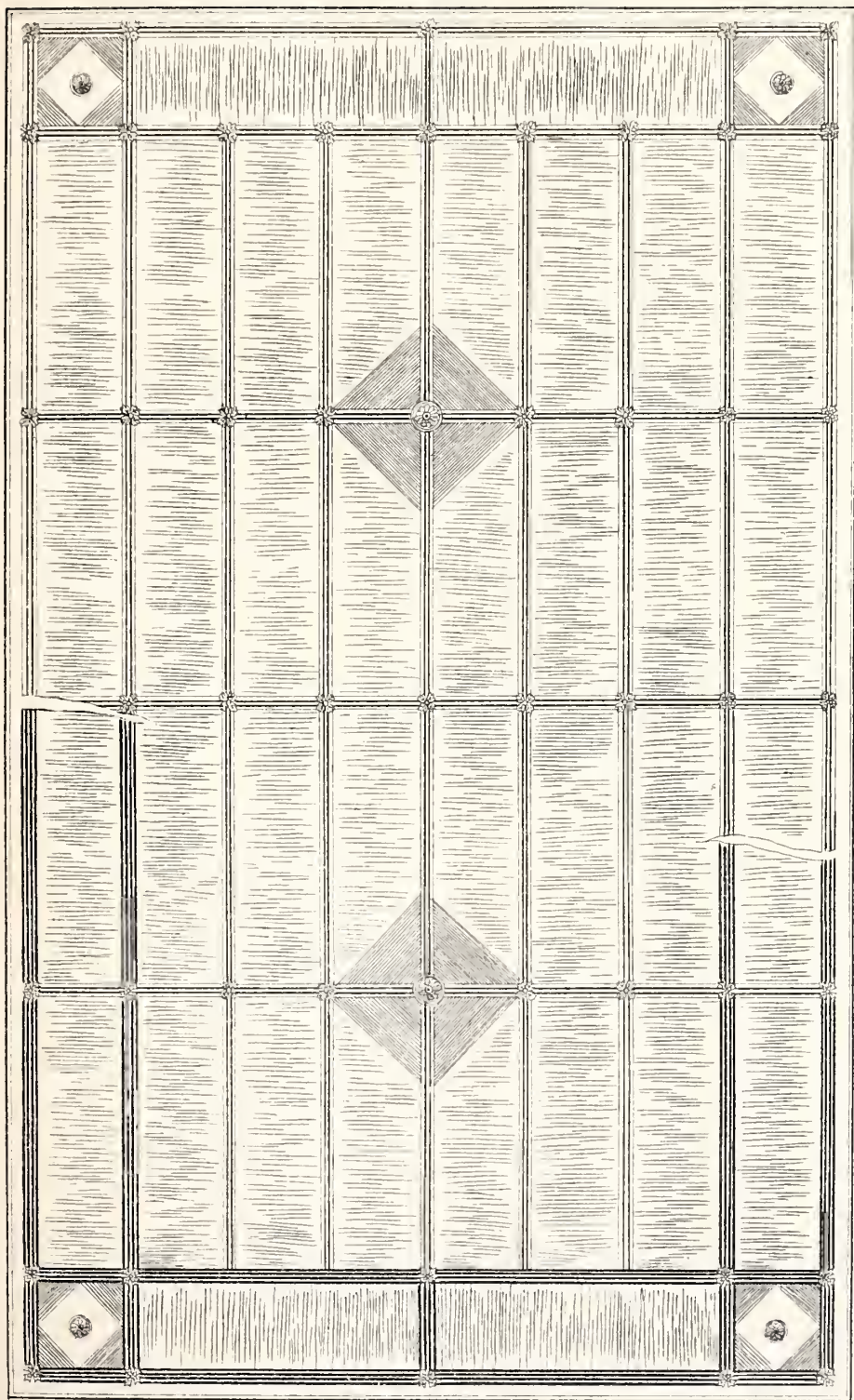


PLATE D. All FLUTED PANELS. Scale $\frac{1}{4}$ in. 1 foot.
 With all No. 3 Mouldings and Rosettes, or with No. 2, (or No. 1) Mouldings
 around border as shown at this end, or all Mouldings and Rosettes can be
 No. 1 or No. 2. (For details see page 2.)

C. D. Waterman, Parlor.....	Detroit, Mich.	J. W. Currier, Residence.....	New Rochelle, N. Y.
Spier & Rohms, Arcts., 1st Ger. Luth. Church.....	"	Flynn & Co., Painters.....	Niagara Falls, "
Rev. J. P. Farmer, Church.....	Eaton Rapids, "	Rev. J. H. Davis, Church.....	N. Huron, "
D. D. Wessels, Drug Store.....	Ea. Tawas, "	New York Sun, Office.....	New York, "
C. E. Lockwood.....	Holly, "	Card & Van Wagenan, Stables.....	"
E. E. Grip & Co., Builders.....	Ishpeming, "	Kingman & Campbell, Stores.....	"
Ishpeming National Bank.....	"	Westminster Presbyterian Church.....	"
Nels. Majhannu, Store.....	"	Rev. M. J. Hughes, St. John's Hall.....	Oswego, "
Wm. E. Hill, Mayor, Porch.....	Kalamazoo, "	Rev. J. B. LeGrande.....	Olmstedville, "
F. Frei, Store.....	Marquette, "	Chas. Ashley, Hardware.....	Ogdensburg, "
Ch. Johnston, Store.....	Negaunee, "	H. M. Reynolds, Stores.....	Oneida, "
Rev. Geo. Atchison, Church.....	Romeo, "	A. A. Hathaway, Church.....	Port Henry, "
Grobisher & Crosby Furniture Co.....	Sturgis, "	Wallhead & Dubois, Decorators.....	Poughkeepsie, "
J. M. Harrows, Architect.....	"	E. D. Forman, Parlor.....	"
First National Bank.....	Traverse City, "	J. H. Lowm, Stores.....	Penn Yan, "
A. W. Mills, Parlor.....	Tecumseh, "	Geo. Pert, Stores.....	Potsdam, "
Burrell & Little, Dealers.....	Duluth, Minn.	D. F. Brown, Stores.....	Postville, "
Public Schools.....	St. Paul, "	Seneca Cady, Stores.....	Peterboro, "
Crane Bros. & Co., Pres. Church.....	Yazoo City, Miss.	J. D. Ely & Co.....	Rome, "
Cochran & Powers.....	St. Louis, Mo.	M. E. Church.....	Rondout, "
E. R. Page, Stores.....	Marshall, "	H. E. Webster, Pres. Union College, Schenectady.....	"
A. S. Kellogg, Pres. Church.....	Boulder, Mont.	S. Hallock, Store.....	Sandy Hill, "
S. B. Turner.....	Alona, Neb.	Rev. J. C. Mallory, M. E. Church.....	Savono, "
T. A. Woodward, Stores.....	Beatrice, "	T. S. Wells, Parlor.....	Stoney Brook, "
J. E. North & Co., Stores.....	Columbus, "	M. Silberberg & Co., Store.....	Suspension Bridge, "
M. Savage, Sec. Knights of Pythias Hall, Hebron.....	"	Hepworth & Son.....	Tonawanda, "
Jas. Tyler, Architect, First Nat'l Bank, Lincoln.....	"	H. Joyee.....	Troy, "
The Lincoln Hotel.....	"	J. W. Griffen, Architect.....	Watertown, "
Lexington Bank.....	Lexington, "	E. L. Paddock, Stores.....	Willard, "
J. C. Stitt, Archt., Citizens Nat'l Bank, Norfolk.....	"	Chapman & Co., State Asylum.....	Willard, "
Rev. J. M. Cassidy, Church.....	O'Neill, "	J. Hoyt & Co., Stores.....	Wellsville, "
T. E. Molack, Stores.....	Schuyler, "	A. D. Jones, Stores.....	Wingville, "
Paul Perkins.....	Ashland, N. H.	Dr. A. F. Van Vranken.....	W. Troy, "
Chas. Marselles, Parlors.....	Exeter, "	D. H. Traver, Dealer.....	W. Sand Lake, "
B. R. Gilman, Parlors.....	Colebrook, "	Coburn Whip Co., Offices.....	Windsor, "
J. A. Stickney, Parlor.....	Great Falls, "	Rev. F. X. LaChance.....	Westport, "
P. P. Bancroft, Sup't N. H. Asylum.....	Conead, "	Rev. W. Wainwright, Parlor.....	Bowmans Bluff, N. C.
Pendexter Mansion, Parlor.....	Intervale, "	Wagner & Hart, Store.....	Asherville, "
W. W. Whicher, Parlor.....	Laconia, "	H. Johnson & Co., Hall.....	Wilmington, "
Smith & Lynch, Builders.....	Littleton, "	J. D. Carpenter, Store.....	Austin, Ohio.
H. H. Townsaud.....	Milton Mills, "	Dr. J. V. Lewis, Post Office and Stores, Alliance.....	"
Head & Dowst.....	Manchester, "	John Schlitz, Restaurant.....	Cleveland, "
H. A. Yeaton, Parlor.....	Portsmouth, "	H. P. Wick, Stores and Bank.....	"
J. Hairhouse, Parlor.....	Jersey City, N. J.	D. R. Hawley & Co., Hotel.....	"
P. Bentley, Offices.....	Jersey City, "	Hyndman & Co.....	Cincinnati, "
O. O. Shackelton, Parlor.....	Hackensack, "	F. P. Korgel, Store.....	Carrollton, "
John Thatcher, Parlor.....	Morristown, "	S. M. Williams, Store.....	Coshocton, "
J. P. Nessell, Parlor.....	Newark, "	T. W. Fletcher, Church.....	Bearsville, "
J. E. Jones, Store and Residence.....	Orange, "	J. P. Howey & Co., Store.....	Bryan, "
G. A. Seaman, Store.....	Perth Amboy, "	H. J. Eady, Store.....	Elyria, "
John Patrick, Store.....	Rutherford, "	H. Bunt, Store.....	E. Liverpool, "
Dr. Swinton, Office.....	Summerville, "	B. F. Bolton, Church of God.....	Findley, "
C. B. Mathis, Store.....	Toms River, "	E. M. Cauderson & Co., Store.....	Garrettsville, "
Clark Bros. & Co., Store.....	Trenton, "	A. E. Crauc, Store.....	"
C. F. W. Wittke.....	Westfield, "	A. E. McCoy, C. P. Church.....	Kenton, "
J. B. Price.....	Afton, "	W. R. Carver, Stores.....	Kent, "
E. S. Bliss, Store.....	Alfred Centre, "	J. E. Bart, M. E. Church.....	Lowellville, "
E. E. Evans, Std. State Hospital, Binghamton.....	"	Rev. J. K. Kohn, R. C. Church.....	Massillon, "
F. J. Miller, 121st Pacific Street.....	Brooklyn, "	German Deposit Bank.....	"
Graves & Co., Decorators, 174 Pearl St.....	Buffalo, "	Masonic Hall.....	Marietta, "
Queen City Bank, 347 Main Street.....	"	Rev. W. L. Mulhane, R. C. Church.....	Mt. Vernon, "
F. Hammond, Jeweler, 54 Seneca Street, "	"	Rev. W. F. Hayes, R. C. Church.....	Newark, "
J. B. Scott.....	Bath, "	Wm. Bradbury, Store.....	New Lisbon, "
A. C. Chapman, Church.....	Benton Centre, "	O. F. Carter, Dealer, Store.....	Oberlin, "
A. J. McNett, Parlor.....	Belmont, "	Geo. Wehe, Architect, Opera House.....	Pomeroy, "
S. M. Shaw, Publisher.....	Cooperstown, "	W. L. Cleland, Bank.....	Poland, "
H. B. Williams, Stores.....	Corning, "	P. B. Conn, Publisher.....	Stuebenville, "
Howe & Dayton, Stores.....	Canandaigua, "	First National Bank.....	St. Clairsville, "
D. C. Twogood, Hotel.....	Canastota, "	Odd Fellows' Hall.....	Salem, "
H. Tripp, Dining Room.....	DeRuyter, "	Wm. Summers, Parlor.....	Strutbers, "
Dr. W. A. Truman, Store.....	"	Produce Exchange, S. D. Co., Offices.....	Toledo, "
Berkett Bros. & Co., Store.....	Dresden, "	Toledo Blade, Offices.....	"
J. M. Edwards.....	Danville, "	McClure & Craighead.....	Wooster, "
A. A. Harpending, Hotel.....	Dundee, "	S. T. Mitchell, Pres. University Hall, Wilberforce.....	"
C. M. Wright, M. E. Church.....	E. Chatham, "	John McCarroll, M. D., Porch.....	Wellsville, "
A. B. Bradley, Store.....	Friendship, "	First U. P. Church.....	"
Citizens Bank.....	"	R. Ratholomew, Stores.....	Warren, "
A. B. Collins & Co., Store.....	Fulton, "	C. H. Medicus.....	Youngstown, "
H. J. Anthony, Store.....	Gloversville, "	R. D. Schultz, Opera House.....	Zanesville, "
F. W. Scott, Store.....	Fredonia, "	A. T. Addison.....	Portland, Oregon.
M. E. Church.....	"	R. C. McMaster, Church.....	Adamsville, Pa.
First Presbyterian Church.....	Fairhaven, "	Geo. W. Seagraves, American Hotel.....	Allentown, "
Sheldon Bros., Dining Room.....	Hornellsville, "	M. V. Horner, Store.....	Altouna, "
Hall & Co., Alapaca Mills.....	Jamestown, "	Rev. J. W. Rhoads, R. C. Church.....	Blairsville, "
J. F. Moyer, M. D., Stores.....	Lockport, "	U. P. Church.....	Bellevue, "
Bingham Bros., Bankers.....	Mt. Morris, "	A. J. Marshall, Store.....	Beaver Falls, "
M. Cooper, Post Office.....	Medina, "	Vorhees & Son, Store.....	Brownsville, "
G. W. Powell.....	Moriah, "	John Bost, Dealer, and Public Schools.....	Bradford, "
McMonigal & Rodgers, Stores.....	Middletown, "	Greenewald & Co., Store.....	Bradford, "
H. T. Clark, Stores.....	Massena, "	J. G. & W. Campbell, Masonic Hall.....	Butler, "
First Presbyterian Church.....	Masonville, "	C. N. Boyd, Druggist.....	Butler, "
M. E. Church.....	Naples, "	D. H. Stratton, First Baptist Church.....	Blossburg, "

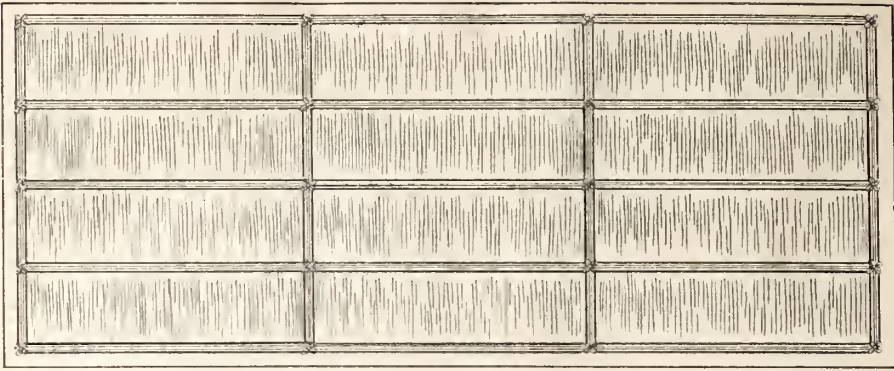


PLATE F 2. Scale $\frac{3}{16}$ in. 1 foot.
All Full Length Fluted Panels.

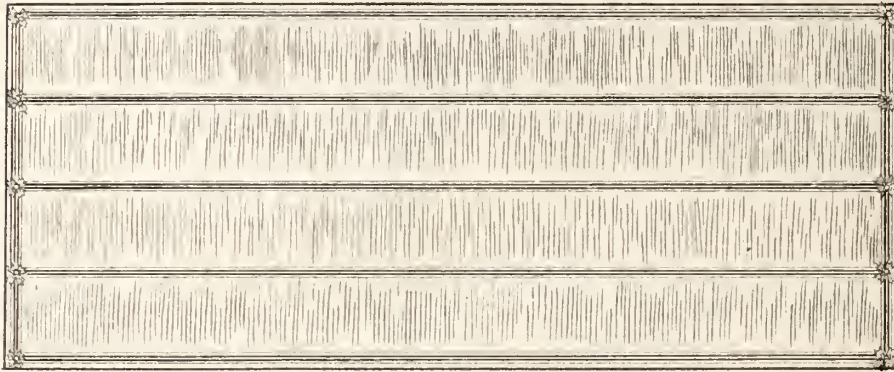
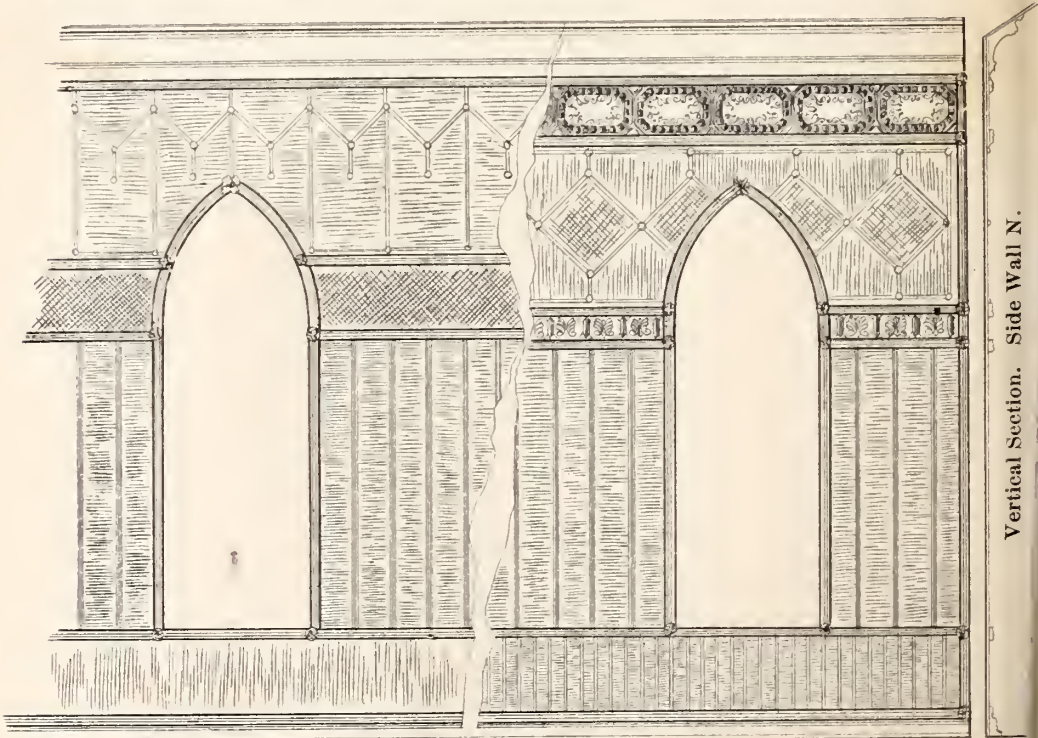


PLATE F. Scale $\frac{3}{16}$ in. 1 foot.
All Fluted Panels. No Mouldings Crossways. Ends of Sheets lapping.



Vertical Section. Side Wall N.

SIDE WALL M.

Scale $\frac{3}{16}$ in. 1 foot.

SIDE WALL N.

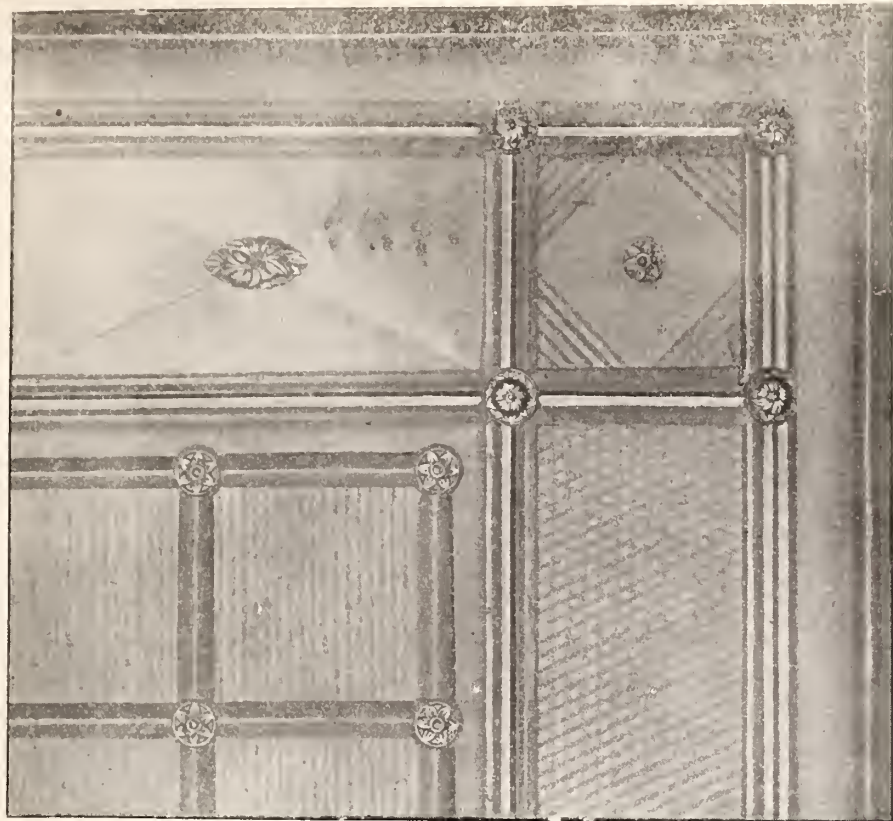


Photo-engraving showing corner section of NORTHROP'S Patent Paneled Ceiling, style E with No. 1 S. and 4 Mouldings and Rosettes. Smooth Panel and Double Fluted Border as preferred.

Embossed Steel Border designed by A. NORTHROP & CO.,
PITTSBURGH, PA.

7 inch

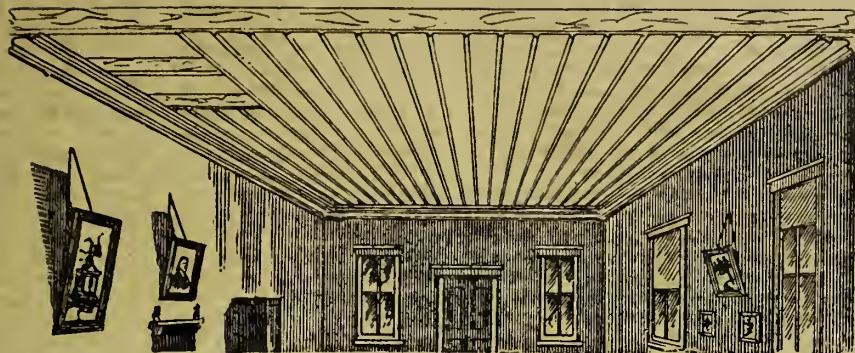
12 inch

7 inch



Full width can be used, or centre part only, as desired. The 7 inch Edge can be used for a small cove.

OVAL CRIMPED CEILINGS.



TESTIMONIALS.

R. D. SCHULTZ, Manager of the Opera House at Janesville, O., writes: "The Ceiling exceeds our expectations."

GEO. GREER, of New Castle, Pa., writes: "The Ceiling went together very nicely, and I got a nice job of putting up, and now that it is painted it makes a very fine ceiling."

MESSRS. MARTIN & EPLEY, of Franklin, Pa., write: "We think the iron ceilings bought of you eighteen months ago saved our store room from complete burning out, as the fire had quite a hold on the fixtures in our room, but could go no further. Give us bottom figures on enclosed diagrams."

W. W. GODDING, Superintendent Government Hospital for the Insane at Washington, D. C., writes: "The Ceilings look well—are non-combustible—are not subject to falling from leaks overhead—and, with an occasional new coat of paint, seem likely to remain in good condition as long as the building. We are using them for halls, bath rooms, closets, smoking rooms and partitions wherever we wish to make rooms as fire-proof as possible."

NOBLE D. LARNER, Secretary Masonic Hall, Washington, D. C., writes to J. Hillingast, Agent: "The four Iron Ceilings placed by you in stores of Masonic Temple, this city, have met our most sanguine expectations and proved satisfactory in every particular. A store room, in our opinion, should have no other ceiling, especially where cleanliness is on object."

MR. A. H. TODD, of Binghamton, N. Y., writes: "The Metal Ceiling for the Conklin Baptist Church came all right, and in due season was placed in position to the great satisfaction of all interested. Its beauty is much admired, and it has improved the acoustic qualities of the house."

A. NORTHROP & Co.

Gentlemen:—I have intended for some time past writing to you in regard to the Iron and Embossed Metal Ceilings you put into my house, I am greatly pleased with them, and if building a house would have no other kind. I may want, in the spring, some other rooms done in the same material.

Yours very truly,

W. P. TOWNSEND.

A. NORTHROP & Co.

Gentlemen:—After waiting for the full completion of the Paneled Metal Ceiling furnished by your house for our City Hall, at Brewer, we are more fully prepared to express our entire satisfaction and pleasure in the design and beautiful appearance it presents. The material is fully up to our expectations, and the workmanship performed in placing and following out the design meets the general approbation of the committee in all respects.

BANGOR, ME., March 3d, 1890.

DR. H. F. TEFFT, Chairman, Bangor, Me.

MR. JEROME AYDELOTT, Agent.

Dear Sir:—Perhaps Mr. Sharp has already written you concerning our church ceiling, which you put up for us. At any rate I also wish to tell you of its perfect satisfaction of all demands. The echo which has so long disturbed us in that room (32 years) is entirely gone, and the acoustic properties are perfect. Loud tones produce no echo in any part of the room, and low tones are heard with distinctness anywhere in the room (66x357). The matter of which I spoke to you, "the fear that the iron would give a metallic ring to the voice," is also perfectly satisfactory, the influence of the metallic ceiling making the tone and quality of the voice more pleasant and more perfect. In fact, the ceiling is satisfactory to us all in every particular. If, at any time, a word from me would be helpful to any who contemplate using these ceilings, feel perfectly free to refer them to me.

Believe me, most truly yours,

H. W. REED,
Pastor First Baptist Church, Belvidere, Ill.

[From *Zion's Herald*, January 16, 1889.]

The Whitinsville, Mass., Methodist Church has received a thorough renovation, and it now stands an ornament to the village and a joy to all the lovers of Zion. Iron ceilings of elaborate and beautiful designs are placed in both the vestry and auditorium. This application of iron is a new kind of work, patented by Messrs. Northrop & Co., of Pittsburgh, Pa. Its many advantages will, we think, before long make it supersede plaster of every kind. For beauty and durability we know of nothing with which it can be compared. It may, in the first instance, cost something more than the ordinary material, but to work out the same tasteful designs by any other method would more than double the labor and expense.

A. NORTHROP & Co.

Gentlemen:—Enclosed find check for balance of account due for putting on ceiling in St. Francis de Sales Church.

I am pleased to express my entire satisfaction with the manner in which the work was done, and am confident that I voice the sentiment of all critical judges, who have viewed the ceiling since its completion,

NEWARK, O., May 2, 1888.

when I say that it is far ahead of wood and plaster, giving beautiful effects that could not be produced by either. Our church will be a standing monument of your skill as designers, and the work will more than substantiate all you claim for your ceilings, both as to beauty, cheapness and permanency.

REV. W. F. HAYES.

A. NORTHROP & Co.

Gentlemen:—I take pleasure in saying that the ceiling which you put in our church last summer has given perfect satisfaction. Instead of detracting (as I feared it might) from the frescoing, I think it has added to the beauty and effect.

We considered our church almost perfect in its acoustics when we had our plaster ceiling, but many of our people think that the Paneled Iron is an improvement in that respect also. I would not hesitate to commend your ceiling to those who are making a change, and prefer it to any other ceiling for a new church.

Yours respectfully,

L. M. GILLELAND,
Pastor Walnut St. Presbyterian Church, Evansville, Ind.

I heartily concur in the above.

PHILLIP C. DICKER, Treas.

EVANSVILLE, IND., Jan. 27th, 1888.

Messrs. A. Northrop & Co., of this city, have just completed for our store here an Iron Ceiling of fluted iron in panels. Our store is 45 feet wide by 96 feet deep; the Ceiling is handsome, durable, and cost less than a wooden Ceiling. We are much pleased with it, and can strongly recommend to any one wanting a good Ceiling to use the Fluted Iron Ceilings. Before adopting this Ceiling we examined a number that they have put up in this city, and all the parties that we talked to about it were very much pleased with them.

OIL WELL SUPPLY CO., LTD.
JOHN EATON, President.

SAN JOSE, COSTA RICA, CENT. AM., Novbr 26th, 1886.

MESSRS. A. NORTHROP & Co., Pittsburgh, Pa.

Dear Sirs:—I take pleasure in advising you of the safe arrival of the ceilings some time ago, which are all now put in their place. I can only say that whoever sees them is delighted with them, and I do not doubt for a moment that they will become quite popular here.

The parts arrived complete and well fitted, so that, although we had no experience with them, we had no trouble in putting them up. If my opinion of your ceilings be of any advantage to your business you will please refer to me whenever it may suit you, and allow me to thank you for the care bestowed on my small order.

Yours truly,

F. F. HERMANN.

A. NORTHROP & Co.

Dear Sirs:—The balance of the ceiling was duly received. I thank you for your kindness in sending it so promptly, as I was very much in want of it. Every piece so far has fitted the place designed for it without any cutting or waste. The ceiling now on is admired by all that see it, and when nicely painted in different shades it will be elegant. As this is the first in this place there are many in to see it, and I hope you will get more orders from here another season.

Respectfully yours,

GEORGE PERT.

POTSDAM, N. Y., December 9th, 1886.

MR. W. D. HINCKLEY, treasurer building committee for the M. E. Church at Warren, Pa., writes: "Your ceiling elicits universal admiration, and we have the satisfaction of believing that it is the best possible ceiling that could be obtained, combining cheapness, strength and durability, as well as presenting a very handsome and attractive appearance. This church has groined arch ceiling, a photograph of which we can send if desired."

THE ARCHITECT of Mercy Hospital, this city, Mr. Geo. Hodgdon, writes: "You have done me a beautiful piece of work, with which the Sisters are highly pleased, and which will be a standing card for you at all times."

A. NORTHROP & Co.

Enclosed find balance due you for Iron Ceiling. We have it on and it looks splendid. It takes in this country and we are mighty glad we got it.

Respectfully,

CALDWELL, IDAHO, April 15, 1889.

W. J. BOONE.

A. NORTHROP & Co.

Gentlemen:—Your material for iron ceiling has arrived and our old ceiling is greatly improved, and we are glad to have found something which is ornamental also. It is much admired by those who have seen it, and we shall do all we can to have other orders for you.

Very respectfully,

Mrs. E. R. McKOWN.

MESS. NORTHROP & Co.

Gentlemen:—I have had my ceiling placed in position, and it gives me pleasure to say it suits me in every particular.

Very truly yours,

WEST TROY, N. Y., 12-27-88.

DR. A. T. VAN VRANKEN.

MESS. NORTHROP & Co.

Gents:—Our church people have their iron ceiling on and they are delighted—tickled. They are painting it now and it looks very fine, extra well; am figuring on three store ceilings, and will take the owners out to see the church ceiling to-morrow.

Yours truly,

TRAER, IA., 4-13-89.

J. B. DENNIS.

A. NORTHROP & Co.

Gentlemen:—The ceilings recently put up in my house by your agent are in every respect all that we could wish—neat, beautiful attractive, clean—and we are not afraid to sit under them.

Yours truly,

HACKENSACK, N. J.

O. O. SHACKLETON.

We also manufacture a great variety of

Iron Roofings, Iron Sidings and Weather-Boarding.

Sole Manufacturers of

NORTHROP'S PAT. CAP-SEAM IRON ROOFING,

Acknowledged by architects and all who have seen it to be the best iron roofing made. Send for roofing circulars and price list to

Principal Office and Manufactory: A. NORTHROP & Co., corner 23rd and Mary Streets, South Side, Pittsburg, Pa.